

WHAT IS CLAIMED IS:

1 1. A code division multiple access transmission system,  
2 comprising:

3 on a transmitting side,

4 a means for obtaining a primary modulated wave by  
5 performing differential coding phase modulation on a carrier signal  
6 in accordance with information; and

7 a means for generating a spread signal including a plurality  
8 of transmission segments, by multiplying said primary modulated  
9 wave by a spread code repeatedly a plurality of times within a symbol  
10 period, and for transmitting said generated spread signal; and

11 on a receiving side,

12 a means for detecting a phase difference between a past  
13 symbol and a present symbol, by performing quasi-synchronous  
14 detection and despreading, and difference operation; and

15 a means for outputting the detected phase difference as  
16 information of said symbol.

1 2. A code division multiple access transmission system,  
2 comprising:

3 on a transmission side,

4 a means for obtaining a primary modulated wave by  
5 performing phase modulation on a carrier signal in accordance with  
6 information;

7 a means for excluding rapid fluctuation of a phase value in a

8 symbol end area of said primary modulated wave; and

9 a means for generating a spread signal by multiplying said  
10 primary modulated wave, from which the rapid fluctuation of the  
11 phase value is excluded, by a spread code, and for transmitting said  
12 generated spread signal; and

13 on a receiving side,

14 a means for regenerating the information by despreading,  
15 said despreading being performed by obtaining a sum of values that,  
16 in turn, are obtained by multiplying the received spread signal by a  
17 corresponding despread code.

1 3. A code division multiple access transmission system,  
2 comprising:

3 on a transmitting side,

4 a means for obtaining a primary modulated wave by  
5 performing phase modulation on a carrier signal in accordance with  
6 information;

7 a means for excluding rapid fluctuation of a value of a spread  
8 code in an end area of a spread code period; and

9 a means for generating a spread signal by multiplying said  
10 primary modulated wave by a spread code, from which the rapid  
11 fluctuation of the value of the spread code is excluded, and for  
12 transmitting said generated spread signal; and

13 on a receiving side,

14 a means for regenerating the information by despreading,  
15 said despreading being performed by obtaining a sum of values that,

16 in turn, are obtained by multiplying the received spread signal by a  
17 corresponding despread code.

1 4. A code division multiple access transmission system,  
2 comprising:

3 on a transmitting side,

4 a means for obtaining a primary modulated wave by  
5 performing phase modulation on a carrier signal in accordance with  
6 information; and

7 a means for generating a spread signal including a plurality  
8 of transmission segments, by multiplying said primary modulated  
9 wave by a spread code sequence repeatedly a plurality of times within  
10 a symbol period, and for transmitting said generated spread signal;  
11 and

12 on a receiving side,

13 a means for regenerating the information by despreding,  
14 said despreding being performed by obtaining a sum of values that,  
15 in turn, are obtained by multiplying transmission segments of the  
16 received spread signal by corresponding despread codes;  
17 wherein,

18 said means for regenerating on the receiving side performs  
19 said despreding in virtual segments defined being superposed on the  
20 transmission segments.

1 5. The code division multiple access transmission system  
2 according to Claim 1, further comprising, on the transmitting side:

3           a means for excluding rapid fluctuation of a phase value in a  
4 symbol end area of said primary modulated wave.

1   6.       The code division multiple access transmission system  
2 according to Claim 1, further comprising, on the transmitting side:

3           a means for excluding rapid fluctuation of a spread code in an  
4 end area of a spread code period of said spread code.

1   7.       The code division multiple access transmission system  
2 according to Claim 1, further comprising, on the receiving side:

3           a means for regenerating the information by despreading,  
4 said despreading being performed by obtaining a sum of values that,  
5 in turn, are obtained by multiplying transmission segments of the  
6 received spread signal by corresponding despread code sequences;  
7 wherein,

8           said means for regenerating on the receiving side performs  
9 said despreading in virtual segments defined being superposed on the  
10 transmission segments.

1   8.       The code division multiple access transmission system  
2 according to Claim 5, further comprising, on the transmitting side:

3           a means for excluding rapid fluctuation of a spread code in an  
4 end area of a spread code period of said spread code.

1   9.       The code division multiple access transmission system  
2 according to Claim 5, further comprising, on the receiving side:

3 a means for regenerating the information by despread-  
4 said despread- ing being performed by obtaining a sum of values that,  
5 in turn, are obtained by multiplying transmission segments of the  
6 received spread signal by corresponding despread code sequences;  
7 wherein,

8 said means for regenerating on the receiving side performs  
9 said despread- ing in virtual segments defined being superposed on the  
10 transmission segments.

1 10. The code division multiple access transmission system  
2 according to Claim 6, further comprising, on the receiving side:

3 a means for regenerating the information by despread-  
4 said despread- ing being performed by obtaining a sum of values that,  
5 in turn, are obtained by multiplying transmission segments of the  
6 received spread signal by corresponding despread codes;  
7 wherein,

8 said means for regenerating on the receiving side performs  
9 said despread- ing in virtual segments defined being superposed on the  
10 transmission segments.

1 11. The code division multiple access transmission system  
2 according to Claim 8, further comprising, on the receiving side:

3 a means for regenerating the information by despread-  
4 said despread- ing being performed by obtaining a sum of values that,  
5 in turn, are obtained by multiplying transmission segments of the  
6 received spread signal by corresponding despread code sequences;

7 wherein,

8       said means for regenerating on the receiving side performs  
9 said despreading in virtual segments defined being superposed on the  
10 transmission segments.

1 12. The code division multiple access transmission system  
2 according to Claim 2, further comprising, on the transmitting side:

3       a means for excluding rapid fluctuation of a spread code in an  
4 end area of a spread code period of said spread code.

1 ~~13. The code division multiple access transmission system~~  
2 ~~according to Claim 2, wherein:~~

3       ~~said means for regenerating on the transmitting side~~  
4 ~~performs said despreading in virtual segments defined being~~  
5 ~~superposed on the transmission segments.~~

1 14. The code division multiple access transmission system  
2 according to Claim 12, wherein:

3       said means for regenerating on the transmitting side  
4 performs said despreading in virtual segments defined being  
5 superposed on the transmission segments..

1 15. The code division multiple access transmission system  
2 according to Claim 3, wherein:

3       said means for regenerating on the transmitting side  
4 ~~performs said despreading in virtual segments defined being~~

5. superposed on the transmission segments.